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# Air Force Role and Support at the Cape Canaveral Spaceport

Thomas Eye

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# ***Air Force Role and Support at the Cape Canaveral Spaceport***

***28 Apr 2015***

**Mr. Thomas Eye  
45 SW/XP**



# *Overview*

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- **45th Space Wing Vision, Mission, Priorities and Commitments**
  - **Air Force Role on Eastern Range**
  - **Public Law – Basis of Commercial Support**
  - **Commercial Space Support at CCAFS**
  - **Future Commercial Space Support**
  - **Summary**
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# ***Senior Leader Support***

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***"Our goal here is to ensure commercially viable domestic launch service providers that will give us assured access to space for our national security space mission."***

- **Secretary of the Air Force Deborah Lee James, Air Force Association Air Force Update - Orlando, Fla. - February 13, 2015**

***"The U.S. government now has an opportunity to leverage the commercial launch market more than we have in the past, to drive price points on the [national security] launch solution that would be more competitive for commercial launch."***

- **AFSPC Commander General John Hyten, House Armed Services Committee, March 17, 2015**
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# 45<sup>th</sup> Space Wing

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## VISION

**The World's Premier Gateway to Space**



## MISSION

**One Team...Delivering Assured  
Space Launch, Range and Combat  
Capabilities for the Nation**





# 45 SW Priorities & Commitments



## 100% Mission Success

- Disciplined and safe process execution
- Full spectrum customer support
- Resource responsibility
- Prove wing readiness
- Create the spaceport of the future



## Ignite Innovation

- Embrace your sharkness
- “Stop doing stupid things”
- Make it better
- Unleash creativity

## Invest in People

- Start with you
- Take care of people and families
- Deliberately develop leaders
- Demand a culture of respect

NINA M. ARMAGNO  
Commander, 45 SW

CRAIG A. NERI  
Command Chief, 45 SW

THOMAS G. FALZARANO  
Commander, 45 OG

ERIC A. KRYSWKOWIAK  
Commander, 45 LCG

MATTHEW V. WALLACE  
Commander, 45 MSG

JULIE M. STOLA  
Commander, 45 MDG



# ***Air Force Role on Eastern Range***

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- **Assured access to space is our prime directive**
    - **Ensure public safety**
      - **65 years of safe flight operations at CCAFS and KSC**
    - **Operate and maintain the Eastern Range**
      - **Encompasses CCAFS, KSC, downrange sites, and 15 million square miles along the eastern seaboard**
      - **Radar, telemetry, communications, command destruct, optics, airspace, etc.**
  - **Manage CCAFS real property for use by DoD and commercial customers**
-



# ***Public Law – Basis of Comm'l Support***

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- **Title 51 – Nat'l and Commercial Space Programs**
    - **Sec 509- Comm'l Space Launch Activities (since '84)**
    - **Make excess launch and reentry property and services available to commercial users**
      - **Launch property and services made available at direct cost (e.g., no rent charged)**
  - **Commercial Space Operations Support Agreement**
    - **Outlines terms/conditions of support (e.g., DoD mission has priority)**
  - **Some restrictions come with operating on AF site**
    - **Does not lend itself to independent commercial ops**
    - **Must be compatible with AF mission and Range Users**
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# ***Commercial Space Support at CCAFS***

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- **Commercial space companies currently operating successfully on CCAFS**
  - **45 SW has currently leased/licensed 65 CCAFS facilities with over 800,000 square feet to commercial users**
    - **Over \$890M in value**
    - **All active CCAFS launch pads currently under commercial lease/license**
      - **Complexes 37 & 41 (ULA)**
      - **Complex 40 (SpaceX)**
      - **Complexes 36 & 46 (Space Florida)**
    - **Recent successes**
      - **Launch Complex 13 – SpaceX (landing pad)**
      - **Large Payload Processing Facility – SpaceX**
-



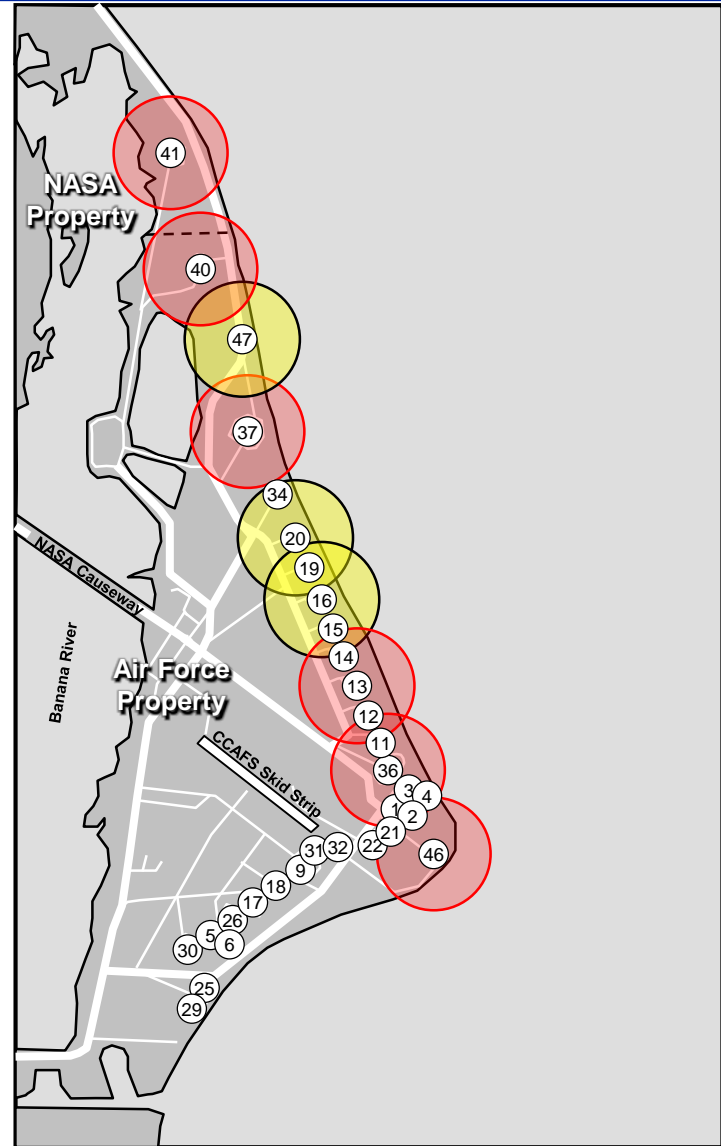
# ***Future Commercial Space Support***

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- **Air Force currently exploring new ways to enhance support for commercial launch operations**
    - **Working with commercial users to develop Automated Flight Safety System (AFSS)**
      - **Maintains public safety with reduced requirement for range infrastructure/support; reduce costs**
      - **Providing sites/interfaces for user provided instrumentation**
  - **Air Force currently engaged in discussions with several companies to bring additional commercial operations to CCAFS**
  - **Constrained by remaining available real estate**
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# Launch Pad Availability at CCAFS





# Future Commercial Space Support

- **Recent innovations**
- **Space Landing Site**
  - Assigned Complex 13 to support SpaceX landing ops
  - Developed conops to tracking/commanding of Stage 1 flyback
- **Automated Flight Safety System (AFSS)**
  - Working with launch providers developing automated safety system for launch vehicles
- **Automated Weather Balloon Release**
  - Worked with local Space Coast high schools to develop robot to release balloons
  - Allows release of weather balloons during inclement weather





# ***Future Commercial Space Support***

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- **Launch schedule gets busier in the next few years**
    - **2014: 18 launches**
    - **2015: 26 launches (9 are comm'l)**
    - **2016: 30+ launches (estimated)**
  - **Shift in Public Safety responsibility/roles for comm'l launches**
    - **Starting with SpaceX launches from KSC, CX 39A**
  - **Engaged to support major new comm'l program**
    - **AF making room for all players**
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# *Summary*

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- **The Air Force is currently supporting a robust commercial launch industry at CCAFS**
    - **Over 57% of 2015 launches are commercially licensed**
  - **Currently innovating new methods to assist commercial space launch operations**
  - **Currently working with multiple new commercial customers...and more are coming!**
  - **Helping to shape the spaceport of the future**
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